

ABSTRACT

A threaded fastener is configured to reduce stress experienced at a female threaded portion of a hole formed in an engine block, when the threaded fastener is inserted therein, and when an axial load is applied thereto. In a particular application, a crankshaft is supported between a top supporting wall of a crankcase and a bottom supporting wall of a main cap. The inventive bolt includes a hollowed-out male threaded portion, which fits into a hole in the top supporting wall. The male threaded portion includes an elastically deformable low-rigidity portion, in which a cylindrical hole is concentrically formed. The maximum allowable stress of the top supporting wall is less than that of the bolt, due to material considerations. The low-rigidity portion is placed overlapping the female threaded portion in the axial direction, and since it is elastically deformable, it helps alleviate the stress experienced by the female threaded portion.